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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,075

05/22/2006

Antonio Fochesato

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EXAMINER

DAVIS, DEBORAH A

ART UNIT

PAPER NUMBER

1655

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,075	<b>Applicant(s)</b> FOCHESATO, ANTONIO	
	<b>Examiner</b> DEBORAH A. DAVIS	<b>Art Unit</b> 1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) 10-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 22-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Applicants' response to the Office Action mailed on October 15, 2008 is acknowledged. Currently, claims 1-19 and 22-23 are pending. Claims 22-23 are newly added claims, 10-19 are withdrawn and 20-21 are cancelled.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 provides for a method for the extraction of terpenes and/or terpenoids from natural resins for essential oils by means of extraction with polar and/or semi-polar solvents in the presence of a rotating magnetic field, but, the method does not set forth the any active method steps which render the method unclear. For clarity, claim 1 should recite the active steps of "extracting". For example: "A method of extracting terpenes and/or terpenoids from natural resins or essential oils comprising extracting said terpenoids and/or terpenes with polar and/or semi-polar solvents in the presence of a rotating magnetic field.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4 stand 8 rejected under 35 U.S.C. 102(b) as being anticipated by Zhou et al. (US 6,228,996) for reasons of record and restated below:

A method for the extraction of terpenes and/or terpenoids from natural resins or essential oils by means of extraction with polar and/or semi-polar solvents in the presence of a rotating magnetic field.

The cited reference of Zhou et al. beneficially teaches the extraction of diterpenes glycosides (i.e. the major components of resin) from plants or botanical material with such polar solvents as ethanol (column 2, lines 52-67, e.g.). The extraction method can be carried out from 1 to 3 hours (see Example 1, e.g.). With respect to the extraction process carried out in the presence of a rotating magnetic field, the Earth is a rotating magnetic field and therefore reads on the instant claims.

Therefore, the cited reference is deemed to anticipate the instant claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (US 2004/0072323) in view of Bye et al (Journal of Analytical Chemistry (abstract), Vol. 345, No. 6, June 1993, pages 411-414).

The cited reference of Matsuda et al. beneficially teaches that terpenes, sesquiterpenes, monoterpenes and triterpenes are naturally occurring compounds extracted from plants and flowers (paragraph 0091, e.g.). Most terpenes are found in the resinous material and therefore read on propolis. The terpenes can be extracted using ethanol as a solvent. Matsuda teaches a specific embodiment of extracting resinous containing compounds that include diterpenes which can be further purified and identified by NMR, (paragraph 0175, e.g.). The cited reference discloses that terpenes are medicinally useful (paragraph 0006, e.g.).

The cited reference of Matsuda does not specifically teach the percent by weight of the extraction solvent, or extraction in the presence of a magnetic field with particular intensity ranges, temperatures or length of extraction times.

However, the cited reference of Bye et al. beneficially teaches an extraction technique with a magnetic stirring plate (rotating magnetic field) which can stir up to six vessels simultaneously versus other traditionally extraction apparatuses such as funnels and can be performed unattended (see entire abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare such extracts of terpenes using a magnetic stir plate of Bye et al because the extraction process can be performed unattended and can stir up to six vessels. With respect to the determining the particular intensity ranges in the magnetic field, would appear to be a matter of adjusting the speed on the magnetic stirrer. The adjustment of particular conventional working conditions (e.g. determining suitable percentages by weight of the extraction solvent, temperatures or length of

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extraction times) is deemed merely a matter of judicious selection and routine optimization, which is well within the purview of the skilled artisan.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the reference, especially in the absence of the evidence to the contrary.

### ***Response to Arguments***

Applicant's arguments as they pertain to the art rejections above have been fully considered but are not deemed persuasive.

Applicant argues that the earth is not a rotating magnetic field as stated by the examiner, but has a rotating magnetic field that rotates with the earth. Applicant argues that the instant claim 1 specified that the extraction takes place in the presence of a rotating magnetic field and the earth's magnetic field does not revolve around any object as it is associated with the earth and all earth bound objects rotate as the earth rotates. This argument has been fully considered but not found to be persuasive.

In response, it is noted by the examiner that the earth itself is not a rotating magnetic field. However, the claims broadly recite that this extraction method is performed in the presence of a rotating magnetic field. Because this extraction method

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is performed on earth, and the magnetic field is present, the cited art meet the claimed limitations and, thus, the rejection is deemed proper.

Applicant argues that the strength of the earth's magnetic field has an intensity ranging from 20000 to 70000 nTelsa where 1 Gauss is equal to 100000 nTelsa. Applicant concludes that the earth's magnetic field is insufficient to enable the extraction of terpenes from natural resins by using the earth's magnetic field and a solvent. These arguments has been fully considered but not found to be persuasive.

In response, the instant claims only require that the extraction be performed in the presence of a magnetic field. The instant claims do not require that the actual extraction be performed by the rotating magnetic field. Further, the actual intensity ranges in Gauss are not required by claim 1 and therefore still read on earth's magnetic field.

Applicant argues that the reference of Matsuda uses NMR for analytical purposes and the actual extraction method is not done in the presence of a rotating magnetic field. This argument has been fully considered and found to be persuasive; therefore the examiner has added another reference in view of Bye et al that beneficially teaches using a magnetic stir plate and the advantages of its use. The magnetic stir plate would generate a magnetic field that rotates.

### ***Conclusion***

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEBORAH A. DAVIS whose telephone number is (571)272-0818. The examiner can normally be reached on 8-5 Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on (571) 272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Deborah A. Davis  
Patent Examiner, AU 1600  
April 2009

/Christopher R. Tate/  
Primary Examiner, Art Unit 1655